

Title IID Grantee Web Information

Project Name: Addressing Math Anxiety through Biofeedback Technology	District: Edge Charter High School
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**Project URL: www.edgecharterschool.com

Brief Description of the grant: (No more than 2 – 3 paragraphs) For literally millions of people, math anxiety refers to the emotional discomfort of worry , feelings of being overwhelmed, and the unpleasant physical sensations of fear that can accompany the prospect of completing even a simple math problem. Research shows that math anxiety actually reduces the amount of working memory available for handling the data necessary to complete a math task (Ashcraft & Kirk, 2001). National studies show that most US students exit high school with skills far below even the minimum expectations for mathematical and qualitative literacy (Steen, 1999). Edge students are no exception. In this grant project, Edge intends to use research based technology to address deficiencies in math and technology, and to improve student performance on high stakes tests. Specific objectives are as follows:

1. To institute a computer based math drill and practice program to improve math fact retrieval. Fluency in basic math facts gives the test taker the opportunity to focus on more cognitively complex tasks of math reasoning.
2. To address testing anxiety in students through a stress management course that incorporates biofeedback training. This course will also serve as a model for curriculum development projects that will now be required to integrate technology.
3. To use an experimental research design that will yield data that will be analyzed to determine the effectiveness of biofeedback technology in reducing testing anxiety and improving test scores.
4. To address parent/family attitudes towards math and technology through fun, interactive "Math-Tech Nights" that will be held at each school site.

Description of Professional Development Activities (25% of grant is for Professional Development): We plan to address teachers' feelings towards math and technology and assist them in developing positive attitudes and teaching strategies through high quality staff development activities. These will include:

1. Staff workshops and follow up individual coaching on technology integration, stress management through biofeedback, math anxiety with renown researcher Sheila Tobias, and math strategies with Pat Desai.
2. A menu of math related activities that all teachers and teacher's assistants will select from to address individual interests and needs.
3. A menu of technology related activities that all staff will select from to address individual interests and needs.
4. Participation in ASSET assessment and activities.

of Schools Impacted by Grant: Edge's 4 school campuses will be impacted by the grant, but we plan to also reach many of the local schools and charters through dissemination activities.

of Teachers Impacted by Grant: 7 certified teachers and 4 teaching assistants

Math Initiative Focus: We will be focusing on reducing math anxiety and improving math skills to improve test scores.